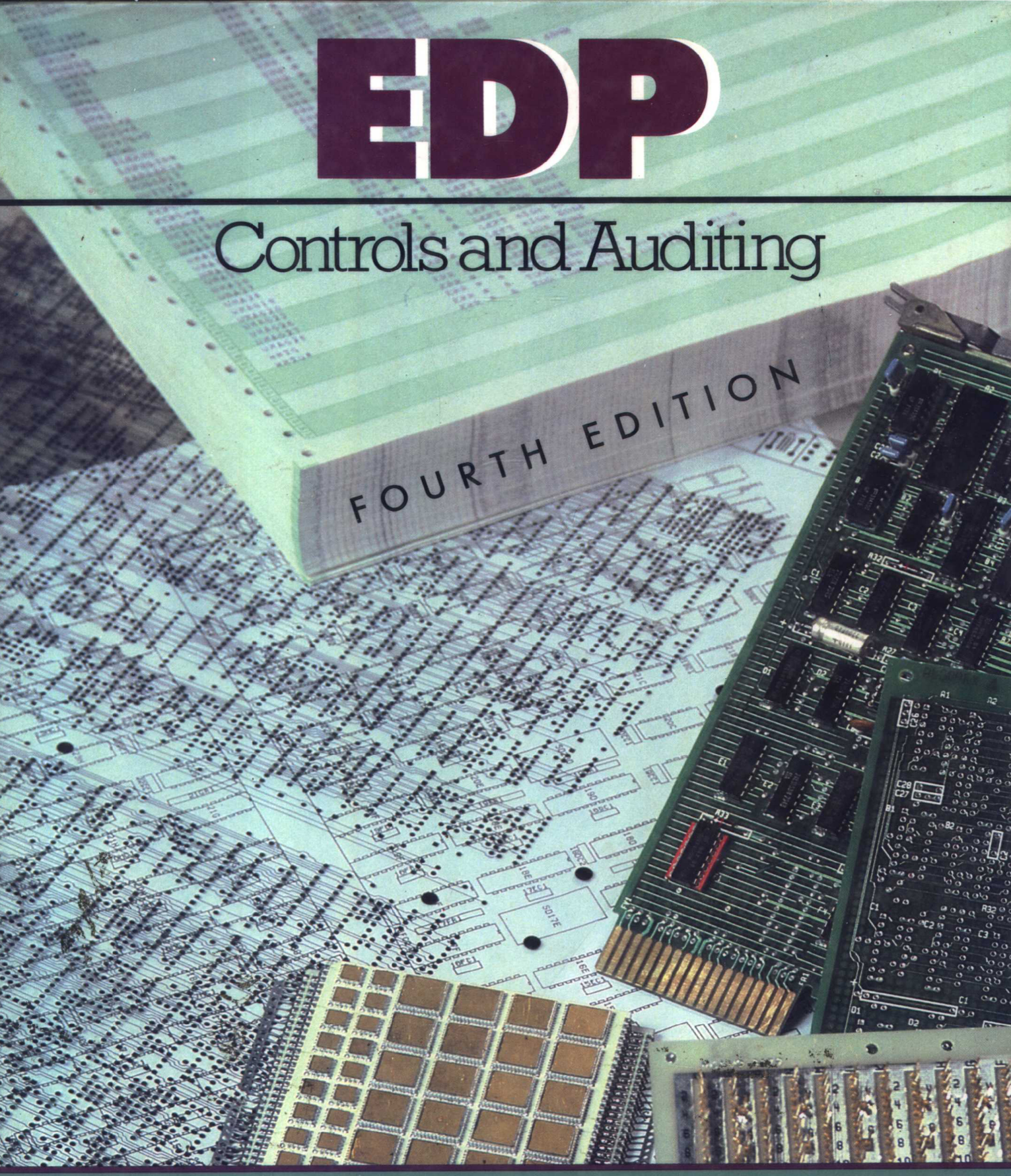
EDP

Controls and Auditing

FOURTH EDITION



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EDP: CONTROLS AND AUDITING

Fourth Edition

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EDP: CONTROLS AND AUDITING

PREFACE

We have incorporated material to make the audit process described in the fourth edition of this book consistent with that recommended by the American Institute of Certified Public Accountants. We added a chapter on audit and control of computer crime (Chapter 14); expanded the material on controls; incorporated the concept of risk in Chapter 4, and then expanded and explained the relationship of the auditor and risk; and added a chapter giving the CPA examination questions on EDP auditing for the past several years. In addition, end-of-chapter problems and cases were added and revised as deemed appropriate.

Chapter 1 is an examination of the auditing function and the impact of EDP on the auditor's role. In Chapter 2, we discuss information systems design to provide perspective to auditors in designing and evaluating computerized controls. We describe flowcharting conventions and techniques for audit purposes in Chapter 3.

Standards recently introduced by the American Institute of Certified Public Accountants, the greater reliance on computer systems, and the Foreign Corrupt Practices Act have significantly emphasized the importance of controls in organizations. We introduce this concept in Chapter 4 with a discussion on risks in a computerized business environment. The chapter explains the relationship between risk and control, and the means by which control can reduce risk. Chapter 5 expands the concepts of control and relates it to an automated business environment. Chapter 6 deals with organizational controls, documentation, and operating practices. In Chapter 7 we discuss how application controls are designed, and in Chapter 8 we discuss processing con-

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trols as they relate to input, computer updating, and output phases of processing applications.

While the entire book is directed toward the evaluation of controls and data in an automated application, the EDP audit process is described in detail in Chapter 9. The evaluation of internal control in EDP systems—with a review of organizational aspects and operating practices, and a detailed review of accounting applications in EDP systems—is described. The testing of EDP systems, both with and without the use of the computer, is also discussed. In Chapter 10 we examine the development and use of computer audit programs for performing auditing tasks, with the inclusion of the use of audit software packages. The case studies presented in Chapters 9, 10, and 15 support the theoretical framework of the book and guide the practitioner in the methods of using the computer in auditing.

In Chapter 11, we discuss the problems and peculiarities of auditing client records that are produced by outside service centers. The audit approach is discussed to evaluate both the service center processing systems and the accounting files. Chapter 12 is a discussion of the control requirements and problems confronting the auditor who is involved in auditing applications using on-line data base systems. In Chapter 13, we talk about the advanced audit techniques for EDP applications and when these techniques should be utilized.

Chapter 14 is designed to address the new and increasing problem of computer crime, and to help the auditor understand the techniques being used to defraud and abuse computer systems. How to counter those strategies with computer crime audit techniques is presented. Chapter 16 presents new questions on EDP auditing from the CPA exam. Previous chapters have included some of the older CPA questions. With the increasing emphasis on EDP auditing, however, this chapter will help the CPA candidate prepare for EDP auditing related topics. The appendixes include a documentation standards manual, an EDP control questionnaire used to evaluate EDP systems, a case study used to test data in testing batch EDP systems, a list of audit software packages, a case study on the use of test data in on-line systems, a glossary, and a bibliography.

Although this book is written primarily from the viewpoint of the auditor, much of the material is equally valid for use by data processing people. Systems designers will likely be interested in the chapters on controls and on the use of the computer in auditing, which will enable them to acquire an understanding and appreciation of the auditor's role in evaluating EDP systems. This book is designed primarily for persons who have a basic knowledge of electronic data processing and auditing concepts and techniques.

Most of the case studies that are presented have been used in colleges and universities throughout the country—many of them have been used in continuing education programs for audit and data processing professionals conducted by the authors over the past twenty years. All case studies have been selected for their interest and educational value. They can be used as foun-

dations for class discussion rather than as illustrations of either correct or incorrect handling of audit problems—there are no right answers! The educational value of these studies is derived from the practice that the student or practitioner receives in analyzing audit problems in EDP situations.

The authors would like to extend appreciation to the following reviewers for their helpful evaluations and suggestions: Stephen D. Harlan, Jr., Peat, Marwick, Mitchell & Co.; Robert Dickens, Duke University; John Myers, Indiana University; Donald R. Wood, William C. Mair, and Kent Yarnall, all of Touche Ross & Co. Much of the material that has been added to the fourth edition has been developed by or under the auspices of federal agencies, particularly the National Bureau of Standards. The authors are appreciative of the excellent work fostered by the National Bureau of Standards, and are pleased to incorporate that work in this edition.

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